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GUY P. JONES

Psittacosis

A great many requests for information relative to the clinical symptoms of psittacosis have come to the State Department of Public Health. In order to comply with these requests the following outline has been abstracted from Report No. 61 of the Ministry of Health of Great Britain, entitled "A Disease of Parrots Communicable to Man (Psittacosis)."

In man psittacosis is a severe disease with a high rate of mortality. The incubation period may vary from 18 to 14 days, but it is usually about 10 days. Occasionally it may even be as long as 21 days. Persons of all ages and both sexes are affected, but the disease is of relatively rare occurrence among children. The course of the disease is from two to three weeks but in a few cases symptoms with fever may remain for as long as eight weeks. Convalescence is almost always of protracted and tedious duration, though it may be interrupted by temporary relapses.

During the first few days or even through the first week, the patient may be comparatively well in spite of high fever. An elevation of temperature may continue with few or no definite physical signs without causing undue anxiety to the medical attendant. During the latter part of the first week, however, the whole aspect of the disease becomes more severe and the patient suffers from pronounced exhaustion, tending to become both somnolent and intermittently irritable, with headache, insomnia and a troublesome cough. Respiratory symptoms begin to appear, developing later into patchy areas of consolidation in the lungs. During the second week the patient may become somewhat comatose, often completely oblivious to all his surroundings. Muttering in delirium may alternate with periods of restlessness and violent excitement. At this critical stage when the patient's life is often despaired of, the temperature may begin to fall and in a few days he gradually shows signs of improvement. does not appear to be out of danger, however, until after another week has elapsed. Although the illness is generally of this severe type, mild and even ambulatory cases may occur.

Onset: The onset is usually fairly acute but in spite of this fact the first symptoms of the disease are often vague, consisting mainly of malaise and feverishness. Other initial or early symptoms are headache, nosebleed, photophobia, chilliness, anorexia, retching, vomiting, sweating, conjunctivitis, sore throat, vague pains in all limbs, backache, and occasional abdominal pains.

Fever: Fever occurs in all cases and in many respects is similar to that of typhoid fever. When seen for the first time, patients often have a temperature of 101° to 103° F. After a few days the temperature characteristically maintains itself at a high level with only slight morning remissions followed by lysis toward the end of the second week. Occasionally the temperature is markedly remittent, but not often. During convalescence the temperature tends to be subnormal in some cases.

Nosebleed: Nosebleed has occurred in about 25 per cent of the cases under observation. It generally occurs on the first day or within the first few days of illness.

Headache: Headache is a constant feature of the disease, occurring from the beginning, attaining its maximal intensity in about 10 days, and then gradually diminishing. The location of the pain in headache is variable but it is always intense.

Chills: These vary in intensity from a slight sense of chilliness to a definite and severe rigor which may last for half an hour or as long as a day in spite of the use of hot appliances.

Pains: Generalized aches and pains of a vague indefinite type are a common early symptom. However, they usually disappear during the first few days of illness. Quite often the pain is localized in the lumbar region, causing the patient to complain of severe backache. In many cases it is completely absent and during the early days of the illness can not be regarded as a prominent feature. Pain in the chest is rare. Abdominal discomfort is common and actual pain in the abdomen less common. Sore throat of mild degree is of frequent occurrence. More rarely it is severe. The fauces and soft palate are red and congested and sometimes covered with a yellowish exudate. In a few cases the tongue itself is sore and sometimes the lips become swollen.

Respiratory Symptoms: The lungs are involved in almost every case, the rare exceptions being very mild or ambulatory cases. Pulmonary involvement must be considered as an essential feature of the classical clinical picture, although it is sometimes more strikingly manifested by its objective signs than by its symptoms.

Cough: Cough of varying intensity is a common feature. It usually appears after the first few days but is sometimes of later occurrence, beginning as a slight retching, dry cough increasing in intensity until the paroxysms are sufficiently severe to be extremely troublesome, leaving the patient entirely exhausted. These paroxysms of coughing are dreaded by the patient, not only because of their weakening effect but also on account of the aggravation to the headache and the prevention of sleep which they cause. In the latter stages of the disease, particularly in fatal cases, the cough disappears. This is attributed to the complete exhaustion of the patient or to his comatose condition, rather than to any change in the pulmonary conditions. In some cases the cough may be an insignificant symptom throughout the illness.

Sputum: In the majority of cases sputum is scanty and in some entirely absent. This is perhaps one of the most remarkable features of the respiratory involvement, the paucity of sputum often being completely out of proportion to what the lung signs would lead one to expect. The sputum is usually mucoid, but may be mucorpulent or frankly purulent.

Lungs: Involvement of the lungs throughout the whole illness may not be necessarily constant. In a typical case, about the fifth day of the illness a few crepitations may be heard at the

base of one or both lungs. At the same time some rhonci may be heard at the apices or scattered throughout the lungs. The percussion note at the base of the lungs may be slightly impaired and after a few days a small area of consolidation may appear, generally near the angle of one scapula. During the second week, similar signs may be found in patchy areas in other parts of one or both lungs, usually at the base. Their distribution may vary from day to day and give the impression of a wandering pneumonia. Sometimes these patches appear to fuse so that a large portion, or even the whole, of one lung seems to be involved. This extensive involvement is apparently more common in some groups of cases than in others. Occasionally no breath signs can be heard in these so-called silent areas and in other cases where the breath signs are feeble or even temporarily absent the shallowness of respiration may be explained by the exhausted and sometimes semicomatose condition of the patient. In fact, one of the most remarkable features of the disease is the frequent absence of rapid or deep breathing even when the physical signs indicate extensive involvement of the lungs. The absence of real respiratory distress is noticeable even in those cases with a rapid rate. The patient may lie flat in bed, perhaps complaining of headache or cough, but never of difficulty in breathing. The features of distress seen in ordinary pneumonia are absent.

Pulse: One of the characteristic features of the disease is the relative slowness of the pulse as compared with the temperature. This is true of nearly all cases at some stage of the disease and in most cases persists throughout the illness. In the more severe cases, especially those with intensive involvement of the lungs, and in nearly all fatal cases, the pulse becomes rapid and feeble about the latter part of the second week.

Nervous System: During the early days of the illness, the patient is generally bright and lucid, except for the common complication of headache with photophobia. Insomnia, irritability and restlessness are not infrequent during the first week and may continue throughout the illness. During the latter part of the first week, most patients become definitely lethargic, appear to be in a stupor, have sluggish speech, and hesitate for a long period before replying to questions. The patient may appear to be quite oblivious to his surroundings, often failing to recognize friends and aroused with various degrees of difficulty, soon relapsing into his previous state. Delirium of varying degree occurs in all except the mild cases. In some it is transitory and only nocturnal, being associated with an increase of fever. Occasional periods of restlessness and intensive excitement are prominent features.

Gastrointestinal Symptoms: Nausea and vomiting are common early symptoms. Anorexia and constipation are almost the rule and continue throughout the illness. The latter is sometimes very intractable and results in abdominal distension. Attemps to relieve by aperients result occasionally in diarrhea but about 12 per cent of the cases investigated suffered from diarrhea without any constipation.

Differential Diagnosis: Although the clinical entity of psittacosis in man is definite, its certain diagnosis may cause the greatest difficulty. It is generally comparatively easy to be able to say that the patient is suffering from typhoid fever, influenza or psittacosis. Differential diagnosis must be considered along these lines. One of the most important differences between psittacosis and typhoid fever is in the degree of pulmonary involvement. In typhoid, there is often an initial bronchitis and lobar pneumonia, or pneumonia of a typical type may occur. Generally, however, in typhoid fever the pulmonary symptoms are comparatively slight, as compared with psittacosis. In the latter disease, pulmonary involvement is a striking and characteristic feature except in mild cases. Although the gastrointestinal symptoms in psittacosis are often similar to those in typhoid fever, there appear to have been no cases of psittacosis with the complications of intestinal perforation or such as occur in typhoid. The spleen is palpable in typhoid fever but in most psittacosis cases the spleen can not be felt. The onset of typhoid fever is usually insidious but although many cases of psittacosis are of an acute onset the differentiation is by no means absolute. The general aching in all the limbs that occurs frequently in psittacosis is not a characteristic feature in typhoid fever.

Rose Spots: The rose spots in typhoid fever and psittacosis have many common features. In both they appear about the seventh to tenth day, consist of slightly raised flattened papules of rose-red color, coming out in successive crops, leaving a brownish stain upon their disappearance. The spots of psittacosis, however, have a white halo around them. The halo may be seen on first examination, or may be brought out by gently rubbing spots which appear to be characteristic.

Psittacosis and Influenza: The infectivity of influenza is infinitely greater than that of psittacosis. Case to case infection is common in influenza but rare in psittacosis. In influenza a patient who seems to be progressing in a short time may change completely, with the case terminating rapidly. There is no such rapid termination in psittacosis, the illness generally running

its course and the patient in fatal cases dying in the third week or later. The absence of rose spots in influenza is an important point in differential diagnosis. Pain in the chest is more common in influenzal pneumonia than in psittacosis. In influenza the gastrointestinal symptoms are not pronounced, there being nothing like the frequency of constipation and abdominal distention that occurs in most cases of psittacosis. Stupor and semicoma are more common in psittacosis than influenza. As contrasted with their not very rare occurrence in influenza, there is a striking absence in psittacosis of cases of suppuration, as shown by otitis media, empyemata, meningitis, etc. The differential diagnosis is often possible on clinical grounds alone if the whole course or a considerable part of the illness is considered. It must be admitted, however, that at one stage, and especially in the early days, differential diagnosis may often be impossible. This is especially true if typhoid fever is to be excluded. The agglutination tests in psittacosis, with few exceptions, have proved consistently negative and in the second week of illness this may be an important differentiation from typhoid or paratyphoid fever. Blood cultures are also completely negative. Agglutination and blood tests are of course valueless in differentiation from influenza. The blood count is of little value in differential diagnosis. Whenever there is a history of association with a sick parrot, especially if recently imported, it is justifiable to be biased in favor of the diagnosis of psittacosis.

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MINIMAL DIETARY FOR HEALTH AND EFFICIENCY

At the present time, the matter of providing adequate foods for supplying individual needs at low cost is receiving wide attention. A number of publications pertaining to emergency nutrition and the provision of foods at low cost have been issued. The President's Organization on Unemployment Relief has issued a bulletin entitled "Food and Nutrition of Our Children." In this publication it is stated that it is fully understood that any recommendations must be adapted to the particular needs of a given community and that any detailed plans are dependent upon the kind of foods available; to some extent upon food customs of the family and the community; and upon the best possible economy. Under the title "Recommendations," the organization states that it is by far the best practice wherever possible for children of needy families to be provided with proper food in their homes. This tends to preserve family unity. The organization further recommends that when supplementary food for children is provided through school lunches there should be the closest possible cooperation with the home and with the recognized agencies in the community. It recommends further that any free lunches be based upon actual need because of lack of funds of the family. Recommendations for free lunches should be made by the established welfare or emergency relief agencies, or by the schools, if there are no established welfare agencies. The services of well-qualified individuals, such as physicians, nurses and nutritionists, should be obtained in order that the nutrition of children in the community may be safeguarded.

Professor Henry C. Sherman of Columbia University, in an article entitled "Emergency Nutrition" published in the Child Health Bulletin for November,

1931, makes the statement: "During the acute emergency all available sources of economical food should be utilized, but money need not be spent in diversifying the diet merely for the sake of variety. Let no one be misled by the extravagant phrase 'deadly monotony.' No deaths are ever caused by monotony of diet if the diet, however simple and cheap, provides the actual necessary nutrients; while shortages of these nutrients do cause all too many deaths, if not directly, then by lowering the resistance to disease." Professor Sherman states further that "the food problem of the unemployment emergency presents itself primarily in the form of the question 'what best to do with the inadequate amount of money.'" He then makes use of the suggestion offered by Miss Lucy H. Gillette that money to be provided for foods be divided into fifths, one-fifth more or less for vegetables and fruits; one-fifth or more for milk and cheese; one-fifth or less for meats, fish and eggs; one-fifth or more for bread and cereals; one-fifth or less for fats, sugar and other groceries. Miss Gillette states that her experience indicates that approximate division of the food money into fifths works well at fairly comfortable levels of expenditure, but that in the food budget of the typical low income family it is necessary to use more than one-fifth often one-third—of the food money for milk in order to provide the amount of milk that the children of such a family actually need. Professor Sherman suggests that "If forced below reasonable standards to bar essentials, we may, in the light of our present knowledge of nutrition, most wisely meet the emergency by concentrating our attention upon efforts to provide these three essential groups of food: (1) milk and its products, (2) fruit and/or vegetables, (3) bread and other cheap sources of calories.

The use of these three essential groups of foods constitutes the very minimum in emergency feeding. One can live very well through the use of the five groups of foods, as suggested by Miss Gillette. One can exist through an emergency upon the use of the three groups of essential foods, as outlined by Professor Sherman.

For many years, the late Professor M. E. Jaffa, Director of the Bureau of Foods and Drugs of the California State Department of Public Health, in cooperation with his wife, Dr. Adele S. Jaffa, prepared a food budget known as the Jaffa Food Budget. Dr. Jaffa has revised this budget to meet present day requirements and it has been published in mimeographed form by the California State Department of Public Health. While this budget does not represent emergency feeding requirements, it constitutes a

valuable guide for the family which desires to economize greatly on the family food budget without making sacrifices of health and efficiency. The dietary presented in the budget calls for only that amount of food which investigation has shown to be actually used by the body in the processes of living and working and represents a minimum for health and efficiency of the working machinery. Food needs which deviate from the average must be considered with each individual case. The prices of the staple foods in the budget are those for November, 1931. Dr. Jaffa concludes that essential food for two adults would cost from \$17.29 to \$19.01 per month. A family consisting of two adults and a child 11 years old can obtain essential foods for from \$24.09 to \$26.49 a month. A family of five, consisting of two adults and children 11, 9 and 7 years of age, can obtain essential foods for from \$35.90 to \$39.49 a month. A family of seven persons, consisting of two adults and children 4, 7, 9, 11 and 13 years of age, can obtain essential foods for from \$49.83 to \$54.87 per month.

The budget provides for protein foods—meat, eggs, milk and beans—starchy foods such as bread and cereals, and fruits and vegetables which help the body to maintain its mineral balance, give bulk, furnish heat and energy. Fats and butter are represented for their concentrated source of heat. Sugar is readily converted into energy. Vitamins and minerals, which are essential to growth and health, are furnished by foods belonging to the groups which include starch, fruits and vegetables, and fats.

The publications referred to in this article, "Emergency Nutrition" by Professor Henry C. Sherman of Columbia University and "Food At Low Cost" by Lucy H. Gillette, may be obtained from the American Child Health Association at low cost. The Jaffa Food Budget in mimeographed form may be obtained from the California State Department of Public Health at Sacramento.

"During a period of extensive and serious unemployment, it is especially important that machinery of public health shall function undisturbed. Thus far the health of the country has been standing up wonderfully. We must do everything in our power to maintain this condition throughout the period of the depression and into the new era of prosperity.

"This is the time of all times to keep up the high standards of public health, not to permit any diminution in budgets, nor to permit economies through the dismissal of tried and efficient workers."—Louis I. Dublin, President, American Public Health Association.

MORBIDITY*

Diphtheria.

63 cases of diphtheria have been reported, as follows: Fresno County 1, Humboldt County 1, Imperial County 2, Kern County 1, Los Angeles County 5, Compton 6, Glendale 1, Long Beach 1, Los Angeles 28, Torrance 1, Orange County 1, Anaheim 1, Fullerton 1, Sacramento County 2, Sacramento 2, San Bernardino County 1, Coronado 1, Santa Barbara County 1, Stanislaus County 2, Tulare 1, Ventura County 2, Yolo County 1.

Scarlet Fever.

114 cases of scarlet fever have been reported, as follows: Alameda 1, Oakland 2, Piedmont 1, Contra Costa County 2, Fresno County 3, Fresno 2, Glenn County 1, Orland 1, Humboldt County 1, Kern County 1, Los Angeles County 8, Avalon 1, Compton 6, Huntington Park 1, Inglewood 3, Long Beach 2, Los Angeles 38, Santa Monica 1, Sierra Madre 1, Merced County 3, Orange County 2, Anaheim 2, Orange 1, Santa Ana 1, Riverside County 3, San Francisco 4, San Joaquin County 2, Stockton 1, San Luis Obispo 1, Lompoc 1, San Jose 1, Santa Cruz 5, Sonoma County 1, Modesto 1, Yuba City 5, Tulare County 1, Ventura County 2, Santa Paula 1.

Measles.

177 cases of measles have been reported, as follows: Alameda 2, Oakland 1, Piedmont 1, Gridley 3, Richmond 5, Humboldt County 52, Los Angeles County 1, Los Angeles 1, Monterey County 9, Pacific Grove 2, Anaheim 1, Sacramento County 3, Sacramento 52, San Bernardino 1, San Francisco 2, Lodi 1,

* From reports received on January 4th and 5th for week ending January 2d.

Stockton 1, Tracy 2, San Luis Obispo 1, Santa Maria 1, Palo Alto 1, San Jose 2, Santa Cruz 10, Loyalton 1, Sonoma County 1, Davis 20.

Smallpox.

9 cases of smallpox have been reported, as follows: Hanford 2, Los Angeles 1, Salinas 1, San Diego 2, San Francisco 1, Vallejo 1, Tulare County 1.

Typhoid Fever.

3 cases of typhoid fever from San Francisco were reported.

Whooping Cough.

62 cases of whooping cough have been reported, as follows: Berkeley 1, Oakland 3, Glenn County 1, Los Angeles County 7, Long Beach 6, Los Angeles 14, Santa Ana 1, Riverside 2, San Diego 1, San Joaquin County 1, Stockton 13, Paso Robles 1, Santa Barbara County 2, Santa Maria 3, Santa Clara County 2, Palo Alto 1, Yreka 2, Trinity County 1.

Meningitis (Epidemic).

6 cases of epidemic meningitis have been reported, as follows: Sacramento County 1, Modesto 1, Oakdale 3, Sutter County 1.

Poliomyelitis.

5 cases of poiomyelitis have been reported, as follows: Kern County 1, Los Angeles 1, San Francisco 2, Santa Paula 1.

Food Poisoning.

2 cases of food poisoning from Glendale were reported.

Septic Sore Throat.

One case of septic sore throat from Los Angeles County was reported.

COMMUNICABLE DISEASE REPORTS

Disease	1931				1930			
	Week ending			Reports for week	Week ending			Reports for week
	Dec. 12	Dec. 19	Dec. 26	ending Jan. 2 received by Jan. 5	Dec. 13	Dec. 20	Dec. 27	ending Jan. 3 received by Jan. 6
Actinomycosis	0 381	0 353	1 181	0 340	0 508	0 196	0 164	0 283
Chickenpox	0	1	0	0		199	0	0
Coccidioidal Granuloma Diphtheria	83	107	61	63	69	63	56	53
Dysentery (Amoebic)	2	1	4	0	5	5	0	0
Dysentery (Bacillary)	ő	3	3	2	7	4	2	Ö
Encephalitis (Epidemic)	i	6	C	Č	Ó	Ö	1	l ő
Erysipelas	20	17	13	15	14	9	15	21
Food Poisoning	1	0	3	2	0	Ö	0	l î
German Measles		12	3	3	6	6	2	7
Gonococcus Infection	191	139	72	122	198	143	88	159
Influenza	116	105	79	161	50	73	59	54
Jaundice (Epidemic)		0	C	0	0	0	0	0
Leprosy	Ō	0	1	0	0	1	0	2
Malaria	2	1	C	0	0	0	1	1
Measles	157	118	44	177	233	230	110	169
Meningitis (Epidemic)	8	4	2	6	4	5	7	12
Mumps	145	74	42	86	229	117	65	123
Ophthalmia Neonatorum	0	C	0	0	0	1	0	1
Paratyphoid Fever	3	1	0	0	0	1	0	0
Pellagra	1	2	1	0	1	1	1	0
Pneumonia (Lobar)	91	101	65	130	61	77	76	112
Poliomyelitis	3	3	1	5	14	19	13	16
Rabies (Animal)	7.	5	6	6	22	20	14	26
Scarlet Fever	168	143	101	114	111	95	79	86
Septic Sore Throat	2	1	2	1	0	0	0	0
Smallpox	6	3	1	9	52	53	41	67
Syphilis	204	174	100	157	202	169	120	107
Tetanus	2	1	0	1	3	0	3	1 5
Trachoma	3	0	0	1	7	6	0	0
Trichinosis	172	144	135	105	231	199	149	143
Tuberculosis	173	144	3	3	231	199	149	8
Typhoid Fever	0	1	1	0	1	0	ő	l ő
Typhus Fever Undulant Fever	5	2	0	1 0	3	0	4	1 0
Whooping Cough	130	86	55	62	116	91	50	74
Whooping Cough	100	00	00	02	110	71		
Totals	1921	1608	980	1571	2152	1597	1122	1531

2005

Diphtheria, apparently, is less prevalent.

Influenza is more prevalent.

Scarlet fever shows little variation in its above-normal status.

Chickenpox continues its widespread prevalence.

Lobar pneumonia is more prevalent.